WIGGLESWORTH (ED.)

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SUBJACENT TISSUES.

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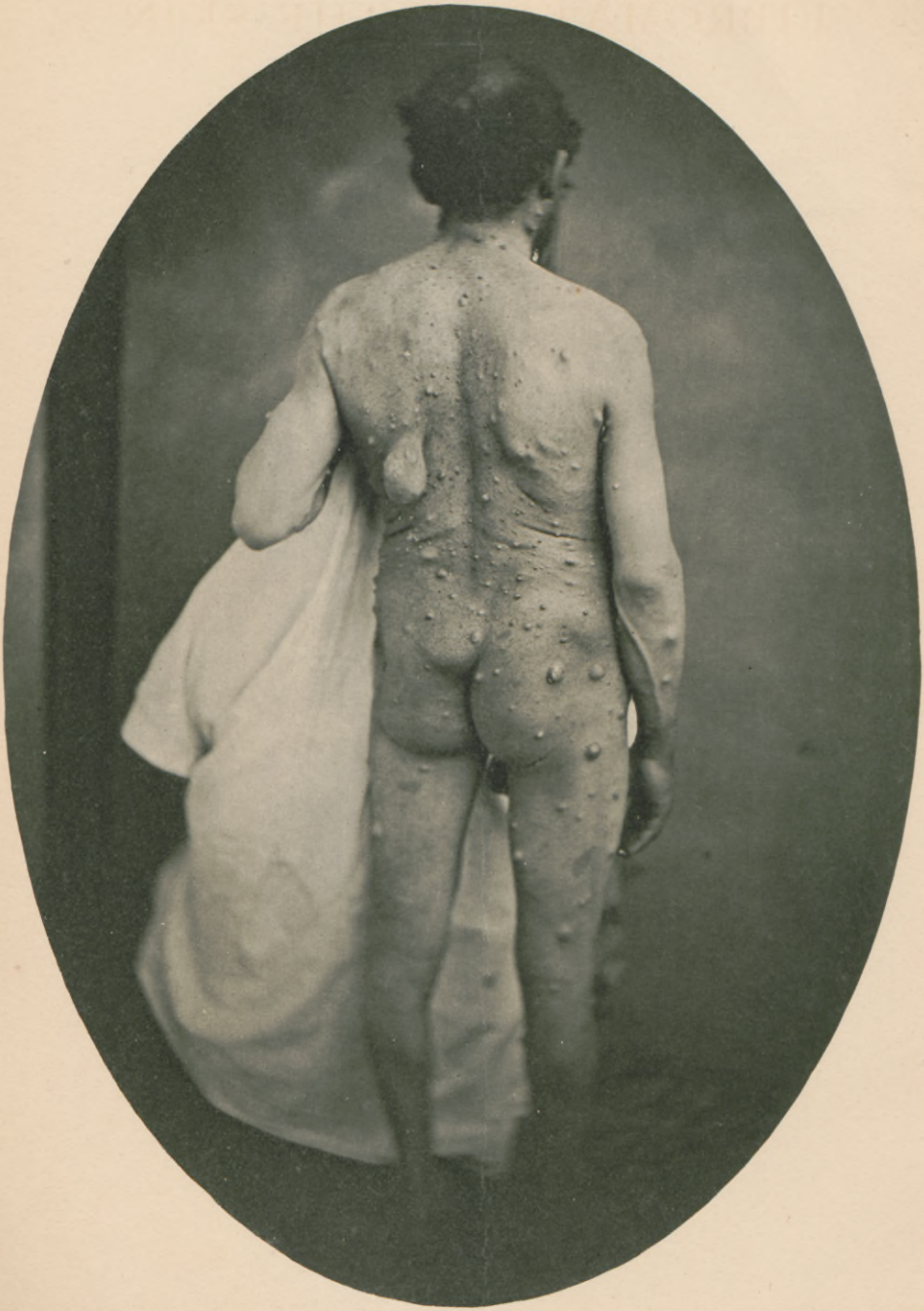

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FIBROMATA OF THE SKIN AND SUBJACENT TISSUES.*

[FIBROMA MOLLUSCUM CUTIS, PENDULA "FIBRO CELLULAR" TUMORS.]

THE comprehensive and able little monograph of Dr. Atkinson [Observations upon two cases of Fibroma molluscum, New York Med. Journal, Dec., 1875] and the description of an exceptionally developed case of Fibroma molluscum, in the July number of this Journal, by Dr. Octerlony, have directed attention to the group of new formations, classified formerly under the head of fibro-cellular tumors, but now, by Virchow, more succinctly designated as fibromata. I propose, therefore, to give a brief account of some interesting cases of this nature which have occurred in Boston.

The inflammatory processes, which, in the internal organs of the body, result merely in a fibrous hyperplasia diffused throughout these organs, cause, when their action is more superficially exerted, new formations, of the same histological structure, although more or less limited in their extent at different times and under varying conditions, and constituting now a general and extended hyperplasia, and again more exactly limited and locally defined tumors. Such new formations may assume the characteristics of Fibroma molluscum [Molluscum simplex, Molluscum fibrosum], of Cutis pendula [Dermatolysis, Pachydermatocele], of Elephantiasis

* Read before the Suffolk District of the Massachusetts Medical Society, Feb. 26, 1876.

[Hypersarcosis, Spargosis, Barbadoes Leg, Morbus Herculeus, Bucnemia tropica, Pachydermia], or of localized fibrous tumors.

Of Fibroma molluscum, there have recently occurred here two interesting cases. One of these, under the care of Dr. J. C. White, will be referred to by him in his "Analysis of 5000 cases of Skin Disease," now publishing in the Boston Medical and Surgical Journal. The other case, also seen by Dr. White as well as by myself, is the one herein to be described. To illustrate the appearance of this patient, I have availed myself of the heliotype process of Messrs. Osgood & Co., Franklin St., Boston, in preference to other means of pictorial representation, in order to obtain an image of the disease, which should be as true to nature as possible, although a woodcut would have given more prominence to many of the smaller, discrete formations which are here lost to view from being involved in shadow.

Of Cutis pendula, two cases were noticeably similar in their general anatomical configuration. One, operated upon by Dr. Ela, died from some intercurrent cause, and Dr. Ela's absence from the State, prevents any description of the case here. The other, perhaps more remarkable, made a complete recovery after an operation for the removal of the growth, performed by Dr. R. M. Hodges, of the Massachusetts General Hospital, by whose kindness I am enabled to present his full account of the disease, the operation and its results. My original intention was to give heliotypic representations of this case also, but the negatives have unfortunately, been broken.

The other three cases here recorded, were kindly copied from the records of the Mass. Gen. Hosp., by Mr. M. H. Richardson, one of the "internes," by the polite permission of Dr. H. J. Bigelow, under whose care the patients were while in the Hospital; and from Dr. Bigelow's private records.

The case of Fibroma molluscum is as follows :—

Case I. The patient presented himself for examination at my office in November, 1875. C. U., aged 45 years, a Bavarian by birth; has been some twenty years in this country. He is by profession an ice-cream maker. His physique is sturdy and his frame well-knit, although below the average in height. He stands 5 feet and 3 inches high, and weighs 140 pounds. In shrewdness and intellectual development generally, he is, perhaps, rather deficient. His parents were not cousins and were always quite healthy until within a few years of their deaths. The father died of dropsy, the mother of heart-disease, according to the patient's story. The patient himself had no affection of the skin congenitally or in early life, nor does he know of any skin disease in his family, immediate or distantly connected. The conditions in which he spent his youth were good, hygienically speaking. He has always been in good health before his present disease, which does not really interfere with his health, except that he has suffered from rheumatism. At present

all his organs appear in good condition, the viscera healthy and the special senses unimpaired. He gives the following history of the existing disease of the skin :

About 14 years since, in 1861, and while a member of the 54th Regiment of Volunteers from New York, he, being at that time in other respects in good health, noticed, for the first time, upon his breast on the right side a small tumor of the size of a pea. His attention was called to it by a slight sensation of pain. During the following fortnight he noticed others also. They appeared originally upon the breast, next invaded the neck, then appeared upon the legs, then upon the arms, and finally universally over the whole body, the face and the scalp included. These nodules increased in number and in size for about three years and a half. Since then they have remained nearly stationary, and during the last three months some have even disappeared. The largest among those which have disappeared was a tumor of the size of a pigeon's egg and situated upon the left breast. It had been also among the first to make its appearance. There have thus far disappeared ten tumors in all. During this whole period of fourteen years the patient has remained in good health, with the exception of attacks of rheumatism at intervals.

The subjective sensations of the patient in respect to the tumors have been inconsiderable. He reports an original or primary slight pricking and itching like that consequent upon a mosquito bite. This is succeeded by the appearance of a pinkish spot which gradually develops into a nodule. The nodule once formed, pain and itching are no longer noticed, as the rule, although a few small excrescences upon the neck have itched slightly. The acuteness of sensation of the skin covering the tumors is little, if at all impaired. Early in November, about three weeks ago, a small nodule of the size of a bean had been snipped from the right loin, at the Massachusetts General Hospital. The spot had now healed and was marked by a very slight cicatrice.

The distribution of the tumors at present is most marked upon the upper portions of the trunk, which is usually the part most abundantly covered. Below the knees their number is small, and the genitals, palms and soles are entirely free from them. The arrangement of the tumors is not a symmetrical one upon the two sides of the body. There is some slight enlargement of the lymphatic glands of the elbows and of the groins, more especially of the left groin where an old hernia is present. The nails are normal.

The number of the tumors, ascertained by subdividing the superficial area of the body into sections and then counting the number within each little separate space, was as follows : Upon the abdomen and chest, 425 ; upon the front of the neck, 51 ; upon the forehead, 21 ; upon the scalp, 19; upon the back of the neck, 43; upon the posterior aspect of the body, 385 ; upon the right arm, 39; upon the left arm, 56; upon the

right leg, 57; upon the left leg, 97; the left side of the body being generally more thickly strewn with the new growth than the right side. In all 1193.

In size the little tumors varied from that of a Guinea pea upwards. The largest was rather under half the size of a man's fist, this one was on the back, below the right scapula and nearer the spinal column, and was pedunculate. There was never any ulceration or sloughing of the skin covering any of the tumors.

As to form or shape, the smaller nodules are semi-globular and sessile, the larger conical or nipple-shaped and sessile, the largest, pear-shaped or round, and pedunculate.

The smallest have a smooth exterior which may become corrugated as the tumors increase in size and the largest were even sacculate. Those upon the scalp were, for the most part, smooth and hairless.

The skin of the body was normal in color. That over the tumors darker and its mucous layer was shown by the Microscope to be more rich than usual in pigment granules. The skin over the very largest tumors had quite a cyanotic tint. All the growths became somewhat paler upon pressure. The largest were slightly cooler than the rest of the body and firmer to the touch than the smaller ones. All were non-pulsating, compressible, soft but not fluctuating, and the conical ones gave to the finger a very peculiar sensation as if the finger were passing down through the skin and pushing the conical nodule before it, inverting it also at the same time, as when one pushes in the end of the finger of a glove.

The site of the nodules was mostly in the subcutaneous cellular tissue and though a few small ones were apparently movable with the skin, the larger ones, more deeply planted and on a broader base, allowed the skin to slip away freely over them.

One quite marked feature in this case was the close resemblance of several of the conical tumors to nipples. Thus below the right true nipple there existed a very good molluscous imitation of it, and both above and below the left nipple were imitations, one of which was so life-like as to suggest an explanation of some of the cases of supernumerary nipples which have been reported.

There were also present, as in Dr. Atkinson's case, several nævi verrucosi. Of these there were three upon the left posterior aspect of the neck and one in the bend of the left elbow joint, dark brown, flabby, shrivelled, superficial, saccular formations, somewhat pedunculate, possessing a few hairs, congenital, stationary in growth and having their bases immovably attached to the skin around.

In opposition to the views of the patient, and though he has been under observation but a short time, I am yet inclined to believe that the tumors are increasing in extent rather than diminishing. On Friday, Dec. 10th, a little tumor was removed by the ecraseur, and the next day

it was as large as ever. The cellular tissue had supplied the loss very rapidly. As there was no skin, however, to protect it, it scabbed over, shrank and withered away, and by the 13th of the month, *i.e*, two days later, the crust was ready to fall and leave a smooth cicatrice. On Monday, Feb. 14th, the patient was again seen, and at that date it was noticed that a fresh nodule, normal to all appearance, had been redeveloped exactly upon the site of what for a time had been a natural cicatrice. The orifices of the sebaceous glands in the skin covering the growths were everywhere well marked, dilated and filled by plugs of moderately thickened, sebaceous material.

A couple of little nodules of the size of cherry stones were removed by Dr. J. C. Warren and myself, and hardened in alcohol, and some excellent sections, both horizontal and vertical, were made and colored with hœmatoxylin by Dr. H. P. Quincy. I now regret that these growths were not injected prior to removal, in order to display any lymphatic vessels which might have been present.

The microscopical examination of these sections showed the usual appearances found in cases of Fibroma molluscum. There were well marked trabeculæ with a fine interlacing meshwork of fibrillated, intercellular substance. Within this meshwork lay the constituent material of the growth, a young connective tissue very rich in cells, with many nuclei interspersed without any cell wall. In some parts the blood vessels were numerous, in others not so abundant. The papillæ were well marked and of various sizes and shapes. In the walls of the sweat ducts nuclei were observed, and around these walls there appeared to be a well defined amount of new cell growth. The structure of the tumors varied somewhat in character, being in places quite dense though usually loose. The loose areolar tissue probably contained formerly much fluid, as in some parts empty spaces were apparent, scattered irregularly throughout the structure of the growths, and separated by delicate fibres of connective tissue. The shrunken condition of the fibrous bands (in Canada balsam) pointed in the same direction. The growth was apparently the result of a thickening of the subcutaneous cellular tissue, which had pushed the skin up before it and caused an atrophy of this last, although the papillæ, as above stated, were still well marked.

Allied to Fibroma molluscum and to Elephantiasis, stands the very loosely defined Dermatolysis of English authors, consisting of loose folds of skin often "in layers like the folds of a tippet," but in which there is also found "a great increase of fibro-cellular elements." This term includes, according to Fox, all forms of pendulous obesity, which breadth of definition would permit us to class as Dermatolysis the massive pendulous growth depicted in the vignette of Virchow's *Krankhaften Geschwülste*, and really portraying a marked example of the molluscous form of the Fibromata. In preference to the term Dermatolysis I have made

use therefore of the title Cutis pendula, which, at least, emphasises the at best but slight histological distinction between this disease and Elephantiasis.

Dr. Hodges gives the following report of his case.

Case II. The subject of this tumor was a farmer, æt. 30, who was born and has always resided in Massachusetts.

He had been told by the attending physician that at his birth his skin was "mottled," the discoloration being most marked on his left arm. His mother has said that when two years old the integument of this arm was quite coarse.

At the time when this patient entered the Massachusetts General Hospital the entire surface of the body was studded with minute subcutaneous growths, some of them presenting a central orifice like those of a molluscum from which a slight excretion could be pressed.

At the side of the spine, beneath the left scapula, there was a large projection, giving to the back the appearance of a lateral curvature. This it evidently was not, as the line of spinous processes was straight, and there was no distortion of the thorax.

His most conspicuous deformity was, however, the condition of his left arm, consisting of a hypertrophy of the subcutaneous cellular tissue, and of the subjacent integument upon the anterior and external aspects of the limb. Upon the inner side of the arm the integument and tissue beneath were unchanged. The disease extended from the middle of the deltoid muscle, upon which was a remarkable growth of hair, to the middle of the fore arm. It did not involve the whole circumference, but had left a strip of varying width along the back of the arm, where neither the skin nor subcutaneous cellular tissue was included in the disease-process. The thickened skin hung in heavy, œdematous, and over-lapping folds, movable upon the fascia beneath, increasing in size from above downwards, reminding one of what were once called "drapery sleeves." The lowermost fold depended from the arm seven inches, and constituted a large and brawny mass so pendulous as to admit of hanging from either side of the fore arm. The whole of this thickened integument was dark and discolored, and the hair follicles were widely separated, enlarged and prominent, giving the surface a "pig skin" look. It was not the seat of any pain, tenderness, or inflammation. Its present size had been attained within the last few years, and it had grown pendulous to the extent of several inches within two years. There were various smaller growths of a similar character in different parts of the body, the most prominent being one on the right fore arm, and two or three on the left leg and thigh. The most noticeable one was situated above the right moustache, over which it hung like a supernumerary lip. The gum and mucous membrane of the upper jaw at the point corresponding to the last described tumor were hypertrophied in a similar manner, though to a less extent. In spite of all these various

manifestations of disease the patient had been and was a healthy, hard working man, nor did the size of the tumor of the arm give rise to the inconvenience which might be supposed.

The removal of the growth, Oct. 19th, 1867, upon the fore arm, was easily accomplished, but was attended by a great amount of venous bleeding. About twenty ligatures were required. Except at the elbow, enough sound integument was obtained to make a good covering. The tumor weighed, after much of the serous infiltration had drained away, four pounds and a half.

In March, 1868, a surface one inch square still remained unhealed, but the patient was able to "bring in all the wood for two or three fires, carrying it on that arm." In April the cicatrization was complete. In November, 1868, when the photograph of his present condition was taken, the patient wrote, "the arm is so little crooked that I seldom notice it. By placing the palms of my hands together and extending my arms, the left is only about half an inch shorter than the right." A section of the mass removed presented the appearance of an infiltrated cellular tissue, similar, as Mr. Paget says, to the "sub-cutaneous cellular tissue of the back, as one sees it dissected in a dropsical body." Under the microscope it exhibited an imperfectly formed cellular tissue indistinctly fibrillated, with much granular and oily matter.

This is by no means the most remarkable of a number of instances of rare forms of tumors which have presented themselves at the Mass. Gen. Hosp. within the last ten years. One of the buttock, so large that the patient, when standing, was in the habit of resting it on a table, and another of the scrotum, also very large, were removed by Dr. H. J. Bigelow several years ago, [Med. Imp. Soc. vol. V., supplement, p. 91.] In both instances there was a recurrence of the disease. In the present instance, a tendency to the development of this disease seeming to prevail throughout the body, it cannot be expected that its eradication will prevent a return, at least to a certain extent.

The notes of Dr. Bigelow's cases are as follows:—

Case III. *Fibro Cellular Tumor Growing in the Skin.*—This case was of a patient 42 years of age, and the disease was of one year's duration. The general aspect of the tumor was that of a very large hydrocele, but further examination showed the testicles to occupy nearly a normal position high up on each side near the pubes. There was no probability that the tumor was of hernial origin, as the inguinal rings were normal in size and clearly defined. The tumor consisted chiefly of slippery lobes that eluded the grasp, and was supposed before the operation to be either fatty or fibro-cellular. It may be remarked that behind and near the anus the insertion of the scrotum had a brawny feel, and the termination of the tumor was noticed to be there undefined. Upon cutting down, the first lobe that was exposed declared the fibro-cellular character of the tissue; and after a dissection, which was rendered tedious by adhesions, the tumor

resolved itself into two principal masses. Each of these was somewhat lobulated, six or more inches in length, three or four inches in diameter, and smallest at the neck. The dissection was carried downwards and backwards between the bulb of the urethra and the rectum, each of which was exposed, and through the triangular ligament.

Their insertion was discovered to be fan-shaped and expanded, high up somewhere between the prostate gland and the rectum, where ligatures were passed around the two pedicles, and the masses were cut away. The microscope showed them to consist of a fibroid structure, with some attempt at an elongated cell growth; and, lying free within the skin and not involving it. They differ from a similar structure which is occasionally found attached to and corrugating the skin itself. Examples of the latter kind exist in Elephantiasis of the scrotum, and also in some other out-growths, of which the following is an example :—

Case IV. *Fibro Cellular Tumor Growing in the Skin.* — The patient was a young woman 25 years of age, and the tumor was of six years' duration when it was removed in August, 1856. She was troubled only by the weight of the mass, which was suspended from the upper part of the left buttock by a large pedicle, the whole weighing after removal 13½ lbs., and being discolored in its surface as in Elephantiasis, wrinkled and lobulated, but entirely flaccid.

A few days confinement to the bed reduced the size of the tumor and rendered the whole mass softer, so that it was evident that the growth owed something of its size and induration to œdema when suspended as usual in the vertical position. The discolored and lobulated investments of the tumor terminated abruptly at their margin in healthy skin. The wound after excision measured 13 × 17 inches, and the patient after having been much prostrated, finally recovered.

The microscopic appearances were as in the preceding case.

In 1863–4 the patient was again examined, and the tumor found beginning to re-appear.

This case is noticed in the records of the Mass. Gen. Hosp. (Vol. 73, p. 2) as "a patient of Dr. Bigelow," without any further records, but is evidently a well-marked example of the disease process which is bounded upon one side by Fibroma molluscum and upon the other by Elephantiasis, and it represents exactly the same pathological condition which is present upon the left lumbar region of the patient shown by Virchow in the frontispiece to his work upon tumors; in other words it is a case of what Virchow calls Elephantiasis Molluscum, since it is a broad-based, connective tissue tumor of immense size and soft contents. It is not known whether inflammatory attacks preceded the present formation or not. From Cutis pendula it is more readily distinguished as the former is a hyperplasia of skin elements *plus* development of fibrous tissue, the latter a hyperplasia of fibrous tissue elements with a skin necessarily increased in size by irritation and increased nutrition.

Dr. Bigelow's first case represents a Fibroma intermediate between the small hard fibromata and the large, soft forms to which the term Elephantiasis is applied. The fasciæ are favorite sites of origin of the fibromata, which may thence develop to a large size, attached partially to such faciæ as their bases, but with the largest part lying loose in the surrounding connective tissue. Such tumors are usually roundish and lobulated, the lobulus being composed of fascicular fibrils radiating towards the periphery of the tumor and being separated by tough, whitish fibres of connective tissue. Such fibromata rarely reach the surface as in this case. To this case is appended a similar one occurring upon a woman.

Case V. *Fibro Cellular Tumor of Vagina.*—J. G., aged 31, entered the hospital January 27th, 1875. About a year and a-half ago she noticed a swelling on the left buttock, near the labium. Several physicians supposed it to be a hernia. The tumor was painless and projected into the vagina. Its shape was oval, it did not adhere to the skin but was lobulated and slipped about, eluding the grasp. Moderately compressible, it attained in the erect posture the size of a cocoanut. No pedicle was discovered.

Upon further careful examination percussion was flat, and fluctuation very doubtful. To settle this question, however, an aspirator was introduced, but without result.

Feb. 21st.—An incision eight inches in length, outside the labium, exposed the tumor. The latter, although hard at certain points, consisted mostly of a juicy fibrous tissue, that was also quite vascular. As its substance was torn open regular layers of wavy vessels appeared in the interstices. The tumor was intimately interwoven with the surrounding tissues, except the skin. As the dissection went on there was a great deal of hæmorrhage and many vessels were tied. When the neck of the tumor had been traced high up between the rectum and the vagina, the hæmorrhage made it advisable to strangulate it, which was done with a double ligature transfixing the base. The œdema allowed this to become loose, and an ecraseur was applied and left in place; sponges were placed in the wound to check the oozing of blood. From day to day the ecraseur was tightened. On the 27th of February the patient died of pyæmia, the symptoms of which had been gradually supervening. At the autopsy pus was found in the right knee-joint and in the substance of the rectus muscle near the navel.

On examination, more of the tumor remained. It had its origin in a slightly thickened connective tissue between the vagina and rectum, and behind the rectum. The tumor was hardened in alchohol and chromic acid, and was found mainly composed of imperfectly formed fibroid tissue.

The histological substructure of all the pathological appearances to which we have called attention, is practically the same, namely fibrous tissue, and we need not allow ourselves to be bewildered

by the use of long names. The distinctions, made for convenience sake and which alone concern us, are clinical, not histological. A small, solitary, hardish and pedunculate fibroma we may call a fibrous tumor, whereas a gigantic, continuously diffused, soft formation, sessile or very broadly pedunculate, and causing disfiguration of the body itself, rather than being merely an attachment to the body, would be properly characterized as Elephantiasis.

The predominate component structure in true Elephantiasis, is connective tissue, and Fibroma molluscum might be regarded as an Elephantiasis mollusca, except that the former process is less diffused and runs its course without fever or inflammation, chronically and almost without attracting attention, while the latter begins, as a rule, with an inflammatory process of the character of erysipelas, accompanied usually by marked fever, the channels of the lymphatic vascular symptom being, for the most part, very early participants in the process, and to the stasis in these is largely due the swelling and the fibrinogenous fluid which exudes when the tumor is cut. So also the adenitis. Elephantiasis is an extensively diffused and continuous process, though limited in extent to parts of the body; Fibroma molluscum occurs as discrete formations of smaller size, scattered over any, or the whole extent of the body in great numbers, and selects by preference the trunk and the face, the very parts usually spared by Elephantiasis. Fibromata mollusca are also always soft, and are due to progressive hyperplasia of the subcutaneous tissue.

As regards Elephantiasis, it is perhaps, hardly necessary here to more than reïterate the necessity of bearing in mind the marked distinction between true Elephantiasis, the E. Arabum, which belongs to the group of cellular or connective tissue tumors, tumores fibrosi, and the E. Græcorum, or true Leprosy, belonging to the granulation group of tumors, which group includes also lupus and syphilitic gummata. The Lepra Arabum is, however, identical with the Elephantiasis of the Greeks, while the Lepra of the Greeks, and of Willan, is the disease at present known as psoriasis. Cases have been reported where true elephantiasis has occurred, as a separate disease, upon persons affected with leprosy, but such are very rare. Elephantiasis is a purely local and limited disease occurring principally upon the limbs, a definitely defined increase of tissue growth; Leprosy on the contrary, is a constitutional and universally diffused disease process.